



Friday Notes is designed to enhance communication among various agricultural sectors, educators, students, and the public who are interested in a variety of plant, animal, food, and environmental issues. Friday Notes advocates the pursuit of credible, unbiased, science-based information. Material contained in linked articles is from the original authors and does not necessarily reflect the views of CAST.

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## Announcements



NASA's [2021 Virtual Earth Day Event](#), April 21-24, will feature live presentations, science resources, a kid zone, chats with experts, and more. Check here for the [Earth Day organization site](#).

"Public Engagement on Gene Editing in Livestock Webinar"—[click here for information](#) about a UC-Davis Virtual Picnic Day Event April 17 at 11:00 a.m. PDT.

The government's Agricultural Research Service announced its [awards for scientific achievements](#).

This publication looks at ways to [broaden the impact of plant science](#) through innovative, integrative, and inclusive outreach.

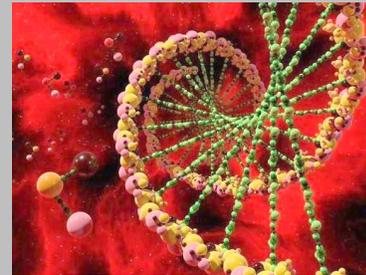
The Society for In Vitro Biology announced its April 28 [webinar about plant genes important for T-DNA trafficking and integration](#) in plant cells.

## CAST College Corner

April 16, 2021

## Gene Editing Gaining Acceptance

With plenty of cheers—and a certain amount of fears—many call gene editing the most important scientific discovery of the 21st century. The film "[Human Nature](#)" added to CRISPR's recognition, and—as this article from the Cornell Alliance for Science points out—there are four [reasons why genome editing might be](#)



[finding public acceptance](#), and a report from the United States National Intelligence Council focuses on the [potential of biotechnology](#) in the global economy.

As links in nearly every Friday Notes edition demonstrate, gene editing is not just a future technique for agriculture, it is very much in the present. This week's newsletter includes gene editing links in the Announcements (UC-Davis event about gene editing in livestock), in the Plant Section (heat-sensing gene in plants, stronger cornstalks, and biodegradable plastics), and in the International Section (gene editing tea plants).

## News and Views

**WASDE Report:** This site provides the latest [World Agricultural Supply and Demand Estimates](#).

**Food Program Change:** Secretary Vilsack announced the end of the [Farmers to Families Food Box Program](#), and indications are that a replacement program will be announced soon.

**Rebuilding Rural Infrastructure:** (1) Many say any program must address the unique needs of rural communities, [including agriculture research facilities](#). (2) Hundreds of food and ag groups say it should include a [bipartisan approach](#). (3) The Association of Public and Land-grant Universities emphasize the many improvements needed at [schools of agriculture](#).

**Johnson and Johnson Vaccine under Review:** The [CDC and FDA are reviewing data involving six reported U.S. cases](#)—among 6.8 million doses—of a rare and severe type of blood clot in individuals after receiving the J&J vaccine.

Fourteen [University of Missouri](#) students were selected to participate in the 2021 University of Missouri System Undergraduate Research Day.

The [University of Nebraska-Lincoln](#) offers podcasts and articles about carbon markets.

[Mississippi State University](#) Provost-EVP David Shaw encouraged lawmakers in the U.S. Senate to invest in science research and development.

Check throughout *Friday Notes* to see more featured articles from member universities.

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GOT AN IDEA?

CAST welcomes ideas for future publications and projects.

**COVID-19 and Rural America:** Nationally, new [COVID-19 infections increased by 10% in rural counties](#)—with hotspots focused on Michigan and parts of Texas.

**Vaccine Mandates?** Several U.S. [universities are mandating students get a COVID-19 vaccine](#) before returning to campus. Other schools—such as Iowa State University—[will not require vaccines](#), but they are offering mass vaccination events.

## Far Side of the Barn

**Kong vs. Godzilla—the Science Angle:** Two Dartmouth professors have a nerdy but fun [debate about the science behind the battle](#). Considering anatomy, geography, and intelligence, which monster would win?



**Lizard vs. Grocery Shelf (video):** A [real-life monster](#)—in the form of a monitor lizard—entered a supermarket in Thailand and decided it needed something on the top shelf.

**UFO Buzz (video):** It might not be surprising that UFO sightings have increased during the pandemic, but these videos ([supposedly from the U.S. military](#)) are certainly noteworthy.

## CAST Updates

### BCCA Winner Announcement Event May 11



The [Borlaug CAST Communication Award](#) (BCCA) is presented annually for outstanding achievement by a scientist, engineer, technologist, or other professional working in the agricultural, environmental, or food sectors for contributing to the advancement of science in the public policy arena. During the past eleven years, this prestigious award has been presented to [accomplished, influential scientists and communicators](#). The announcement for the 2021 BCCA winner will be held May 11. Watch for further details in next week's *Friday Notes* editions.

With the BCCA event just around the corner, let's revisit our past BCCA recipients and see what they have been up to: [Akinwumi Adesina](#) (2010), [Catherine Bertini](#) (2011), [Carl Winter](#) (2012), [Jeff Simmons](#) (2013), [Alison Van Eenennaam](#) (2014), [Channa S. Prakash](#) (2015), [Kevin Folta](#) (2016), [Jayson Lusk](#) (2017), [Marty Matlock](#) (2018), [Frank Mitloehner](#) (2019), and [Alexa Lamm](#) (2020).

## Animal Agriculture and Environmental News

**Pigs, Brains, and Research:** University of Illinois scientists say the domestic pig is ideal for biomedical research, and in this study they look at how the [pig's early rearing environment affects its brain development](#).

**Be Prepared:** Animal agriculture groups have partnered with U.S. first responders to create a video series that helps [farmers and ranchers prepare emergency action plans](#).

**Beefy:** Beef and beef cattle [prices are experiencing an upward trend](#) as the U.S. economy emerges from a year-long pandemic, according to this Texas A&M specialist.

**Poultry Prospects:** In this interview, an animal protein expert says the [poultry industry should be profitable in 2021](#) as the pandemic lifts, but producers need to carefully monitor feed supplies and prices.

**Cows, Calves, and Artificial Insemination:** Many beef producers think the main job of a cow is to annually raise a healthy calf, and these Kansas State University experts offer [considerations about artificial insemination](#) in the herd.

**Pig Rescue (video):** The “Better Piggies Rescue” organization reports an uptick in “shelter pigs” because adopters fail to do their [research before adopting a pig](#).



The USDA-APHIS National Wildlife Research Center works on finding solutions for [wildlife management problems related to agriculture](#), natural resources, property, and human health and safety.

This speaker focused on how [innovation in pig nutrition](#) might be helpful for veterinary medicine and the animal’s overall health.

## Food Science and Safety News

**Food Prices (video):** Some think many food staples—like eggs and bread—[will cost more compared to a year ago](#)

**Youth Preferences:** Food is [Gen Z’s top spending priority](#), according to a survey that looked at various eating trends for young people.

**Using the Human Microbiome:** Microbiologists are looking at [new ways to fight viral infections](#), including COVID-19, with the bacteria already living in our intestines.

**Meat Exports:** Red meat exports for February trended below last year’s levels, but the head of the U.S. Meat Export Federation says [the 2021 outlook remains strong](#).

**Melon Chain:** Texas A&M researchers are using a “table-to-farm” approach to [create a safer, healthier, and more sustainable melon supply chain](#) in the United States by considering consumer preferences at the dinner table.

**Spam, Spam, Spam (video):** This canned meat from Minnesota went [from a wartime necessity to a global menu item](#) and Hawaiian delicacy. The word apparently came from mixing the words “spice” and “ham.”



A new FDA plan—Closer to Zero—hopes to [reduce exposure to toxic elements in foods](#) for babies and infants. FDA testing indicates that infants are not at immediate risk from the current levels of toxins in food products.

## Plant Agriculture and Environmental News

**Uncovering the Heat-sensing Gene:** Researchers [identified a gene that could help plants](#) endure warmer temperatures and have longer growth periods.

**Shorter, Stronger Corn:** Scientists are using [breeding techniques, GMO technology, and gene-editing tactics](#) in an effort to develop shorter-stature corn that can withstand winds as strong as those brought by last summer’s derecho.

**Agriculturally Produced Plastic:** In the [push to grow biodegradable plastic](#), this company revealed prototype lines of camelina that are genetically engineered to produce PHA

bioplastic within seeds.

**Weeds, Native Plants, and Pasta:** Scientists in Utah are trying to [eradicate invasive weeds while maintaining native plants](#). Their efforts might even include a pasta machine.

**Ag Bill Focuses on Conservation:** [Farmers and conservationists are praising a bill](#) introduced in the Pennsylvania Senate that would bring funding to stop agricultural runoff from polluting rivers and streams.

**River in the Courts:** Farmers along the Missouri River won a [mass action federal lawsuit against the Army Corps of Engineers](#) for land damages they say are traceable to the agency's management of the river.

**Soybean Move:** A major tire company says it will phase out petroleum-derived oils from its products by 2040, [using instead sustainable soybean oil](#) as part of a partnership with the United Soybean Board.



Robots are learning to pick fruit, and now University of Florida research says [artificial intelligence can tell which strawberries will taste better](#).

This interview with a North Carolina State University doctoral student known as "Ms. Pineapple" shows the contributions she has made (and will make) to the [plant breeding program—especially with pineapples](#).

This site includes a [drought update](#) with 12 states now reporting very dry conditions.

## International News

**Tea Time:** Genome editing may help [protect Kenya's most important cash crop](#)--tea grown in the country's prime highlands--from the effects of climate change.

**Nuclear Issue:** The Japanese government says it will start [releasing treated radioactive water](#) from the damaged Fukushima nuclear plant into the Pacific Ocean in two years.

**Cattle for the Tropics:** [Scientists are developing cattle](#) that have the milk production capabilities of Holsteins and the heat tolerance of the Gyr breed found in South America.

**Pork Imports:** To combat rising pork prices and stabilize supplies, the Philippine government will provide [more market access for pork imports](#) by lowering tariff rates.

**Medical First:** A Japanese woman is the world's [first lung transplant from living donors](#) given to a recovered—but lung-damaged—COVID-19 patient.



This [rare, powerful "cloud avalanche"](#) occurred at Kapuche Glacier Lake in Nepal.

A [volcano eruption](#) on the Caribbean island of St. Vincent is causing a humanitarian emergency.

## General Interest News

**Should You Tip a Robot? (video):** A major pizza company is rolling out a [robot delivery service](#) to select customers.

**Swarms of Robots:** Santosh Pitla—University of Nebraska-Lincoln—envisions swarms of small autonomous [robots applying fertilizer, planting seeds, and testing soil](#). Pitla was the task force chair of the recent CAST Issue Paper called [Ground and Aerial Robots for Agricultural Production: Opportunities and Challenges](#).

**Microplastics:** Cornell and other university experts explain [microplastics—from packaging, soda bottles, and more](#)—that are small enough to “spiral around the globe.”

**Turbulent Forecast:** These researchers at the recent Iowa Water Conference project think the [state is in for a challenging mix](#) of super-ragweed, floods, damaged crops, and drought as climate changes occur.

**Meteor Sighting:** Dashcam footage and security videos show a meteor streaking [across the night sky in Florida](#).



**As more robots work in service jobs, the need is growing for [people to act as their remote managers](#)—a type of shadow workforce of humans. See related links at upper left.**

## Photo Credits

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- \* American Seed Trade Association
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- \* American Society of Plant Biologists
- \* American Veterinary Medical Association
- \* Aquatic Plant Management Society
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- \* Cal Poly State University
- \* Corteva Agriscience
- \* CropLife America
- \* Crop Science Society of America
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- \* Bayer
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- \* National Corn Growers Association/Iowa Corn Promotion Board
- \* National Milk Producers Federation
- \* National Pork Board
- \* North Central Weed Science Society
- \* Northeastern Weed Science Society
- \* Poultry Science Association
- \* Rural Sociological Society
- \* Society for In Vitro Biology
- \* Soil Science Society of America
- \* Syngenta Crop Protection
- \* The Fertilizer Institute
- \* Tuskegee University
- \* United Soybean Board
- \* University of Nevada-Reno
- \* U.S. Poultry and Egg Association
- \* Weed Science Society of America
- \* Western Society of Weed Science

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The Science Source for Food,  
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